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EXAMINER

CHIN, RANDALL E

ART UNIT PAPER NUMBER

1744

DATE MAILED: 11/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/912,692

**Applicant(s)**

BUFORD, EDWARD T.

**Examiner**

Randall Chin

**Art Unit**

1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 12-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17 is/are allowed.
- 6) ☒ Claim(s) 12-16 and 18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 12-16 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12, line 1, "for toothbrushes" should just read --for a toothbrush-- to be consistent with line 2. On line 2, "the head portion" should read --a head portion-- since the "head portion" should not be positively claimed. Claim 12 merely recites in the preamble "A bristle". On line 3, the phrase "by means of a shaft portion" is awkwardly written and should be corrected. This phrase should just read --by a shaft portion--. No "means plus function" language would be proper here for a "shaft portion" and would not make sense. Further, the recitation on lines 7-9 "and wherein said bristle is arranged in tufts on said head portion of said toothbrush said tufts comprising multiple bristles" makes the claim scope vague and indefinite because it is unclear whether just a **bristle** is being claimed or whether **a toothbrush with a head portion and tufts of bristles is being claimed in combination**. Applicant should note that the preamble of claim 12 merely recites "A bristle..." and the body of the claim should not positively recite the

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toothbrush, head portion and/or tufts of bristles, otherwise the claim will be held indefinite.

On a similar note as stated above, the preambles of claims 13 and 14 make the claim scope indefinite since the preamble of claim 13 sets forth "A toothbrush..." and the preamble of claim 14 sets forth "A brush device...". Both these preambles conflict with the preamble of claim 12 which as already mentioned merely recites "A bristle". The preambles of claims 13 and 14 must be amended for clarity and consistency since these claims each depend on independent claim 12.

Claim 13, lines 2-3, "said tufts of bristles" lack proper antecedent basis since they are not and cannot be positively claimed (i.e., because of the preamble of claim 12). On line 8, "act as abrasive devices" is grammatically incorrect. On line 9, "said spiral groove" should read --said one or more spiral grooves-- to be consistent with line 4. Applicant is respectfully requested in reviewing and correcting all claims on this specific matter for accuracy. Also, on line 7, the recitation "bend, rotate" is **redundant** of that already recited back on line 6 of claim 12.

Claim 14, lines 1-2, "the base of said brush" lack antecedent basis. Claim 14, lines 2-3, "each tuft of bristles" cannot be positively claimed (i.e., because of the preamble of claim 12), as already stated for claim 13. Also, on line 6, the recitation "bend and twist" is **redundant** of that already recited back on line 6 of claim 12. On line 7, "said spiral grooves" should read --said one or more spiral grooves-- to be consistent with lines 3-4.

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Claim 15, line 3, "tufts of said bristle" should read --tufts of said bristles--. Such change should be made in all such locations where necessary. On lines 7-8, "said longitudinal surface area" lacks proper antecedent basis.

Claim 16, line 1, delete the term "structure" for consistency and clarity with respect to claim 12. Also, since claim 16 depends on claim 12, the phrase on lines 1-2 "for use in toothbrushes" should also be deleted for consistency and clarity with respect to claim 12. Again on line 3 of claim 16, the recitation "twist and rotate" is redundant of that already recited back on line 6 of claim 12. On line 7, "said groove(s)" lacks antecedent basis. On line 8, "acts as abrasive device" lacks antecedent basis.

Claim 18, line 1, "said at least one groove" lacks proper antecedent basis. Again, reference to an "individual" bristle on line 2 or "tufts of bristles" on lines 3 and 4 makes the claim scope indefinite. Also, on line 4, "said longitudinal axis" lacks antecedent basis.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 12 is rejected under 35 U.S.C. 102(b) as being anticipated by Hallock 2,266,195 (hereinafter Hallock).

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Claim 12 has been construed as merely claiming a bristle and not the combination of a bristle and toothbrush (or brush device). This is because the preamble of claim 12 begins with the language "A bristle..."

The patent to Hallock discloses a bristle 19 for a toothbrush having a base end for fixed attachment to a head portion of a toothbrush and a tip end for brushing and cleaning and wherein said base and tip ends are connected by a shaft portion and wherein the shaft portion and the tip end stand upright on the head portion of the toothbrush and wherein the shaft is "sufficiently flexible" so that application of vertical or horizontal pressure on the tip end and shaft portion of the bristle will inherently cause the bristle to twist, bend or rotate about said base end so that said flexible shaft and the tip end of the bristle are inherently "abrasive" means for cleaning and wherein the bristle is arranged in tufts on the head portion of the toothbrush said tufts comprising multiple bristles. Applicant should note that claim 12 is met by nearly every single toothbrush patent which discloses flexible or resilient bristles fixed into the head portion and that such claim is unduly broad.

5. Claim 12 is rejected under 35 U.S.C. 102(b) as being anticipated by Briggs 2,431,606 (hereinafter Briggs).

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Claim 12 has been construed as merely claiming a bristle and not the combination of a bristle and toothbrush (or brush device). This is because the preamble of claim 12 begins with the language "A bristle..."

The patent to Briggs discloses a bristle 11 for a toothbrush having a base end for fixed attachment to a head portion of a toothbrush and a tip end for brushing and cleaning and wherein said base and tip ends are connected by a shaft portion and wherein the shaft portion and the tip end stand upright on the head portion of the toothbrush and wherein the shaft is "sufficiently flexible" so that application of vertical or horizontal pressure on the tip end and shaft portion of the bristle will inherently cause the bristle to twist, bend or rotate about said base end so that said flexible shaft and the tip end of the bristle are inherently "abrasive" means for cleaning and wherein the bristle is arranged in tufts on the head portion of the toothbrush said tufts comprising multiple bristles. Applicant should note that claim 12 is met by nearly every single toothbrush patent which discloses flexible or resilient bristles fixed into the head portion and that such claim is unduly broad.

6. Claims 12-14, 16 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Harbeke 5,220,774 (hereinafter Harbeke).

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Claims 12-14, 16 and 18 have been construed as merely claiming a bristle and not the combination of a bristle and toothbrush (or brush device). This is because the preamble of claim 12 begins with the language "A bristle...". See 35USC112 claim rejections above.

As for claim 1, the patent to Harbeke '774 discloses in Fig. 3 a filament 1 (or "bristle") which would have a base end for fixed attachment to a "head portion of a toothbrush" (never positively recited) and a tip end for brushing and cleaning and wherein said base and tip ends are connected by a shaft portion 2 and wherein the shaft portion and the tip end stand upright on a head portion of a toothbrush (again, never positively recited) and wherein the shaft is "sufficiently flexible" so that application of vertical or horizontal pressure on the tip end and shaft portion of the bristle will inherently cause the bristle to twist, bend or rotate about said base end so that said flexible shaft and the tip end of the bristle are inherently "abrasive" means for cleaning.

As for the recitations in claims 13, 14, 16 and 18 reciting that the bristle is used in a toothbrush, that there are vertical and horizontal pressures applied to the tip of the bristle in a brushing motion, that the bristle becomes an abrasive device with respect to surfaces to be cleaned, that the bristle twists and rotates in the manner of an agitator of a washing machine thereby producing fluid cross currents in saliva and forces saliva into spaces in and around teeth and gums, and that the bristle increases contacts between shaft and teeth and gum surfaces to remove foreign particles lodged in between and around teeth and gums, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the



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prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Also, all these limitations are merely functional in form and add no relevant structure to the "bristle" itself which is the only feature being claimed in claims 12-14, 16 and 18 and not the bristle in combination with a toothbrush (or brush device). Harbeke clearly teaches a filament or bristle with a spiral slot or groove 4 therein (Fig. 3).

7. Claims 12-14, 16 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Terumichi Ono 3,567,569 (hereinafter Ono).

As well as the claims are understood, the claims are being rejected based solely on a bristle structure without the brush device or toothbrush since the preamble (first few lines) of claim 12 sets forth "A bristle...". However, it should be noted, that Ono still discloses that the bristle can be used in "brushes" or as "brush bristles" (see col. 1, lines 55-56 and col. 5, lines 19-24). Ono clearly teaches structure for a fiber or bristle with a shallow spiral groove.

As for claim 12, the patent to Ono discloses a bristle as shown in Figs.1 and 2 which would have a base end for fixed attachment to "a head portion of a toothbrush" (never positively recited) and a tip end for brushing and cleaning and wherein said base and tip ends are connected by a shaft portion and wherein the shaft portion and the tip

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end stand upright on a head portion of a toothbrush (again, never positively recited) and wherein the shaft is "sufficiently flexible" so that application of vertical or horizontal pressure on the tip end and shaft portion of the bristle will inherently cause the bristle to twist, bend or rotate about said base end so that said flexible shaft and the tip end of the bristle are inherently "abrasive" means for cleaning. Note again, Ono still discloses that the bristle can be used in "brushes" or as "brush bristles" (see col. 1, lines 55-56 and col. 5, lines 19-24). As for the bristle being used in a "toothbrush", Ono already teaches that the bristle can be used in "brushes" or as "brush bristles" (see col. 1, lines 55-56 and col. 5, lines 19-24) and one can clearly utilize Ono's brush to brush one's teeth. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

As for claims 13 and 14, the bristle as shown in Figs. 1 and 2 of Ono has a screw shape structure defining at least one "shallow" (a relative term) spiral groove along the bristle's longitudinal axis. The bristle base end when mounted onto a head portion of a brush device would be maintained in a fixed position on the base portion of a brush device. The bristle, clearly to a certain degree, would be a "substantially rigid shaft" as shown in Fig. 1. If used in a brush, clearly the substantially rigid shaft would be sufficiently flexible (see col. 5, lines 19-23) due to their flexibility and physical tenacity. Ono's bristle could perform in the same manner as the functional language of claim 1 recites. The application of slight pressure to the tips of the bristles and the use of a

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scrubbing action said bristles can bend, rotate and agitate saliva in the mouth due to their inherent flexibility and wherein the scrubbing action makes the tips and said longitudinal axes of the bristles act as abrasive devices for cleaning the teeth and gums and whereby the spiral groove on the longitudinal axis acts as an extended scraping device for the removal of waste materials, including plaque, from the teeth and gums. As for claims 13 and 14, lines 3-4, reciting that each tuft consists of not less than ten of said bristles, as stated above, the claims are being rejected based solely on a bristle structure without the brush device or toothbrush since the preamble (first few lines) of claim 12 sets forth "A bristle...".

As for claim 16, the application of vertical and horizontal pressure in a back and forth scrubbing motion on the tip of said bristle would inherently cause the bristle to twist and rotate in the manner of the agitator of a washing machine, thereby producing fluid cross currents in the saliva and forces the saliva into the spaces in and around the teeth and gums and wherein the twisting and bending of the shaft of said bristle increases the contacts between the shaft of the bristle and the surface of the teeth and gums so that the groove on the shaft of the bristle inherently act as an abrasive device to remove foreign particles lodged between and around the teeth and gums.

As for claim 18, the groove runs spirally clockwise or counterclockwise on the bristle.

***Allowable Subject Matter***

8. Claim 17 is allowed.

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Claim 15 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Randall Chin whose telephone number is (571) 272-1270. The examiner can normally be reached on Monday through Thursday and every other Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on (571) 272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Randall Chin  
Primary Examiner  
Art Unit 1744